

<b>Interview Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/724,041	LEIENDECKER, MARTIN	
	<b>Examiner</b>	<b>Art Unit</b>	
	Erica E. Cadugan	3722	

All participants (applicant, applicant's representative, PTO personnel):

- (1) Erica E. Cadugan. (3) \_\_\_\_\_  
 (2) Walter Otteson. (4) \_\_\_\_\_

Date of Interview: 6/21/06 and 7/5/06.

Type: a) ☒ Telephonic b) ☐ Video Conference  
 c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.  
 If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: 1,7,8,11 and 13.

Identification of prior art discussed: U.S. Pat. No.'s 6,352,496 to Oldani and 5,996,329 to Cardenas.

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Examiner proposed the attached Examiner's Amendment. However, an agreement on acceptable language could not be made at this time.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

\_\_\_\_\_  
 Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

#### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent and Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

ATTACHMENT TO

INTERVIEW SUMMARY

\*\*\*\*\*  
\*\*\* TX REPORT \*\*\*  
\*\*\*\*\*

TRANSMISSION OK

TX/RX NO	3067
CONNECTION TEL	301 869 8929
SUBADDRESS	
CONNECTION ID	
ST. TIME	06/21 14:39
USAGE T	03'38
PGS. SENT	9
RESULT	OK

# ATTACHMENT TO INTERVIEW SUMMARY



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

## Fax Cover Sheet

**Date:** 21 Jun 2006

<b>To:</b> Mr. Walter Otteson	<b>From:</b> Erica E. Cadugan
<b>Application/Control Number:</b> 10724,041	<b>Art Unit:</b> 3722
<b>Fax No.:</b> (301) 869-8929	<b>Phone No.:</b> (571) 272-4474
<b>Voice No.:</b> (301) 869-8950	<b>Return Fax No.:</b> (571) 273-8300
<b>Re:</b> dkt no. A 91874	<b>CC:</b>
<input checked="" type="checkbox"/> <b>Urgent</b> <input checked="" type="checkbox"/> <b>For Review</b> <input type="checkbox"/> <b>For Comment</b> <input checked="" type="checkbox"/> <b>For Reply</b> <input type="checkbox"/> <b>Per Your Request</b>	

**Comments:**

Proposed Examiner's Amendment.

**Number of pages** 9 **including this page**

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# ATTACHMENT TO INTERVIEW SUMMARY

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## Proposed EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with \*\*\* on \*\*\*.

The application has been amended as follows:

Claim 1 (Currently Amended) An arrangement for forming a control window in a cylinder wall of a cylinder housing for a two-stroke internal combustion engine, the cylinder wall delimiting an interior space of the cylinder and the control window being an opening of a flow channel into said interior space, the arrangement comprising:

a tool holder having a free end and defining a rotational axis about which said tool holder can be rotated;

a driveable cutting tool mounted on said tool holder at said free end thereof and having a drive axis lying essentially orthogonally to said rotational axis;

said driveable cutting tool being driveable in rotation and said drive axis being the center of rotation and a longitudinal axis of said cutting tool;

said cutting tool being part of a tool head that includes a motor and a lug having a longitudinal axis that extends generally parallel to said rotational axis and mates with a receptacle in said tool holder to form a readily detachable connection between the tool head and the tool holder;

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said tool holder with said driveable cutting tool being movable into said interior space and being movable transversely with respect to said rotational axis so as to be brought into contact engagement with said cylinder wall at the position provided for said control window which is to be cut out of said cylinder wall; and,

said driveable cutting tool being driveable by pivot movements of said tool holder about said rotational axis into a desired angular position with respect to said cylinder wall.

Examiner notes that the last limitation (i.e., the last two lines of the claim) of claim 1 can be deleted if desired.

Claim 7 has been canceled. (Incorporated into claim 1)

Claim 8 (Currently Amended). The arrangement of claim [7] 1, wherein said [tool head includes] motor is a pneumatic motor for driving said cutting tool.

Claim 11 (Currently Amended) An arrangement for forming a control window in a cylinder wall of a cylinder housing for a two-stroke internal combustion engine, the cylinder wall delimiting an interior space of the cylinder and the control window being an opening of a flow channel into said interior space, the arrangement comprising:

a tool holder having a free end withdrawably positioned in said interior space of said cylinder and defining a rotational axis about which said tool holder can be pivotally rotated;

a driveable cutting tool mounted on said tool holder at said free end thereof so as to be likewise disposed in said interior space and having a drive axis lying essentially orthogonally to said rotational axis;

said driveable cutting tool being driveable in rotation and said drive axis being the center of rotation and a longitudinal axis of said cutting tool;

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said cutting tool being part of a tool head that includes a motor and a lug having a longitudinal axis that extends generally parallel to said rotational axis and mates with a receptacle in said tool holder to form a readily detachable connection between the tool head and the tool holder;

said tool holder with said driveable cutting tool being movable transversely with respect to said rotational axis so as to be brought into contact engagement with said cylinder wall at the position provided for said control window which is to be cut out of said cylinder wall.

Claim 13 (Currently Amended). An arrangement for forming a control window in a cylinder wall of a cylinder housing for a two-stroke internal combustion engine, the cylinder wall delimiting an interior space of the cylinder and the control window being an opening of a flow channel into said interior space, the arrangement comprising:

a tool holder having a free end and defining a rotational axis about which said tool holder can be rotated;

a driveable cutting tool mounted on said tool holder at said free end thereof and having a drive axis lying essentially orthogonally to said rotational axis;

said driveable cutting tool being driveable in rotation and said drive axis being the center of rotation and a longitudinal axis of said cutting tool;

said cutting tool being part of a tool head that includes a motor and a lug having a longitudinal axis that extends generally parallel to said rotational axis and mates with a receptacle in said tool holder to form a readily detachable connection between the tool head and the tool holder;

said tool holder with said driveable cutting tool being movable into said interior space and being movable transversely with respect to said rotational axis so as to be brought into contact engagement with said cylinder wall at the position provided for said control window which is to be cut out of said cylinder wall and said driveable cutting tool being driveable by pivot movements of said tool holder about said rotational axis into a desired angular position with respect to said cylinder wall; and,

said cutting tool being part of a tool head connectable to said tool holder and said tool head including a motor for driving said cutting tool.

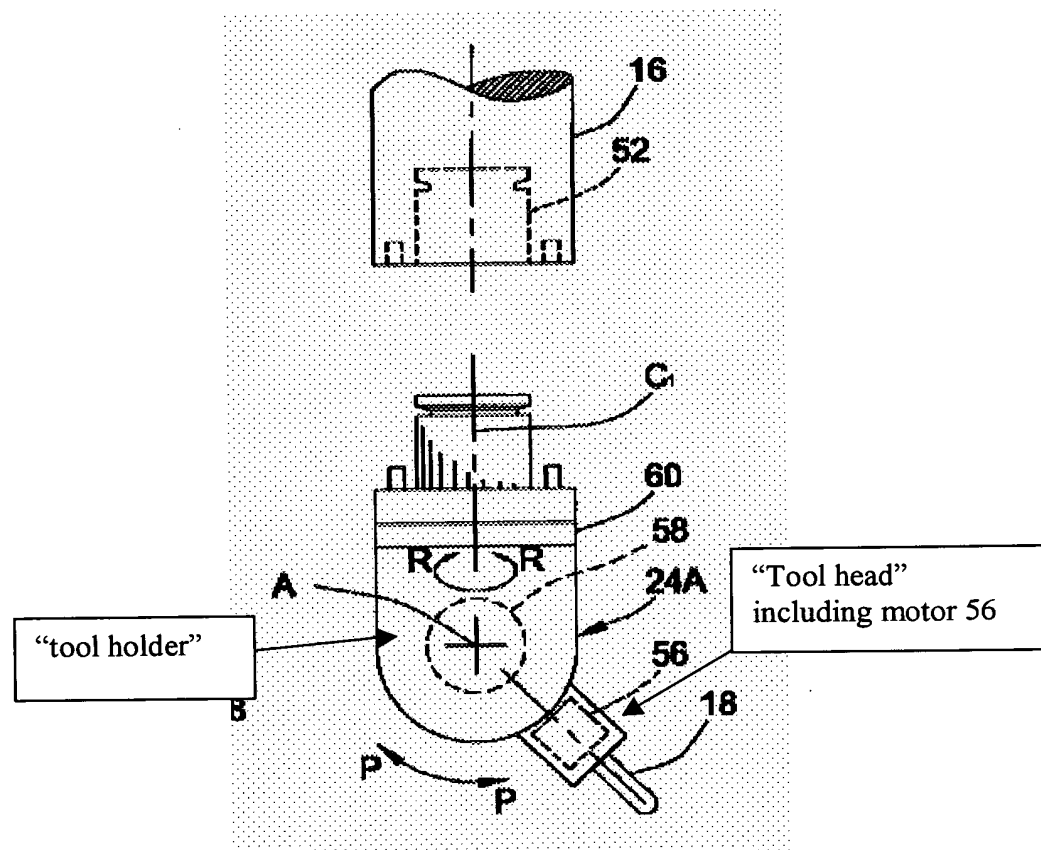
With respect to the prior art, Examiner notes that in the response filed 2/17/06, Applicant provided a discussion of the Lewis and Eich references (US 3757637 and 5697739).

Whether or not Examiner agrees with Applicant's assertions about these references, Examiner notes that U.S. Pat. No. 6,352,496 to Oldani is even closer than these to the presently-disclosed invention, and teaches a tool holder (see Figure 3) having a free end and defining a rotational or "pivot" axis  $C_1$  about which the tool holder holding milling-type cutting tool 18 can be rotated or "pivoted" via motor 60. Additionally, the cutting tool 18 is mounted so as to be driven in rotation about its longitudinal central axis, which constitutes the claimed "drive axis" via motor 56. Note that motor 58 drives the cutting tool in rotation about axis A, such that the drive axis or central longitudinal axis of the cutting tool 18 can be positioned orthogonally to the rotational axis  $C_1$ . See Figure 3, and also see column 3, lines 33-53. Additionally, note that the tool holder and cutting tool can be moved in a direction (such as in the direction of the Y axis as viewed in Figure 1) transverse to the rotational axis  $C_1$  (see also col. 3, lines 24-32, for example). Note also that the rotation or pivoting movement about the axis  $C_1$ , although this is not presently



claimed, can occur during machining so that complex parts can be machined (col. 8, lines 2-4, for example).

Re claims 7 and 13, for example, note that at least the motor 56 in combination with whatever structure must inherently be present to hold the tool bit 18 form part of a “tool head” that is “connectable” to the “tool holder” (noting that the “tool holder” as claimed can be considered to be at least the member shown in the reproduction of a portion of Figure 3 below).

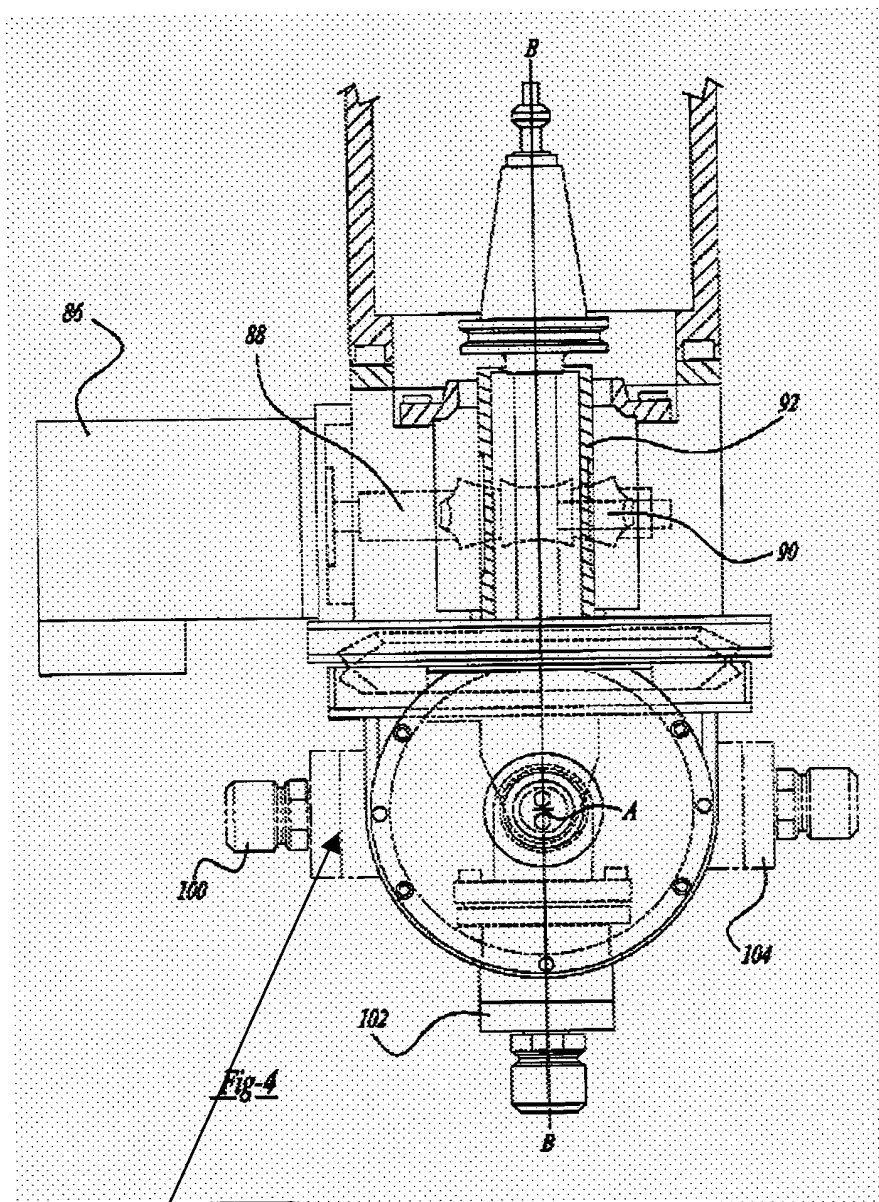


Similarly, U.S. Pat. No. 5,996,329 to Cardenas teaches a multi-axis machining head including a “tool holder” (including at least member 22) that has a tool mounting portion 44 for mounting a milling tool 18 located at a free end thereof. The “tool holder” (including at least element 22) is rotatable about a vertical “rotational axis” B via motor 86 (see Figures 3-4 and

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col. 4, lines 5-11, for example). Additionally, the cutting tool 18 is rotatable about axis A via motor 48 (see Figures 3-4 and col. 3, lines 10-14, for example), which is orthogonal to the vertical rotational axis B. Note that this rotation about axis A provides at least positions 100 and 104 wherein the central longitudinal rotational axis of the cutting tool bit 18 is orthogonal to the rotational axis B. Note also that Cardenas explicitly teaches that the tool is moved in X, Y, and Z directions (shown in Figures 1-2, see also col. 4, lines 16-24, for example), and thus, the tool can be moved in a direction "transversely" to the rotational axis B. Also note that the rotation or pivoting movement about the axis B, although this is not presently claimed, can occur during machining (see col. 4, lines 16-24, for example).

Re claim 7, for example, see the reproduction of Figure 4 below.



"tool head", for example

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Additionally, re claim 11 and the tool being positioned in the particular two-stroke engine workpiece, Examiner notes that references such as either of JP 60-148657 and US Patent Application Publication 2003/0079344 (filed September 9, 2002) each teach a workpiece having the claimed configuration and generically teaching that the windows or ports are "cut" with a mechanical type cutter, without explicitly describing the structure or type of that cutter or machining device.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have substituted either of the specific machining devices taught by Oldani or Cardenas for the generic machining setup taught by either of JP '657 or USPGP '344 for the purpose of providing a known and thus readily available means to perform the windowing operation taught by either of JP '657 or USPGP '344.